

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims

- 1. (Currently Amended) A rubber composition usable for the manufacture of tires, comprising, as base constituents, a diene elastomer, a white filler as reinforcing filler and a coupling agent (white filler/elastomer) that links the reinforcing filler and the elastomer, the white filler comprising a titanium oxide having the following characteristics:
- (a) it comprises by mass more than 0.5% of a metallic element, other than titanium, selected from the group consisting of Al, Fe, Si, Zr and mixtures thereof;
 - (b) its specific BET surface area is between 20 and 200 m²/g;
 - (c) its average particle size (by mass), dw, is between 20 and 400 nm; and
- (d) its disagglomeration rate, α , measured by the ultrasound disagglomeration test, at 100% power of a 600-watt ultrasonic probe, is greater than $2x10^{-2} \, \mu m^{-1}/s$..
- 2. (Original) The composition according to Claim 1, wherein the total quantity of reinforcing filler is between 20 and 400 phr (parts by weight to one hundred parts of elastomer).
- 3. (Original) The composition according to Claim 1, wherein the BET surface area of the titanium oxide is within a range of 30 to $150 \text{ m}^2/\text{g}$.
- 4. (Original) The composition according to Claim 1, wherein the average particle size d_w of the titanium oxide is within a range of 30 to 200 nm.
- 5. (Original) The composition according to Claim 1, wherein the disagglomeration rate α of the titanium oxide is greater than $5x10^{-2} \, \mu m^{-1}/s$.
 - 6. (Original) The composition according to Claim 1, wherein the reinforcing white filler

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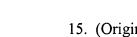


comprises more than 50% by weight titanium oxide.

- 7. (Original) The composition according to Claim 1, wherein the total reinforcing white filler is titanium oxide.
- 8. (Original) The composition according to Claim 1, wherein the reinforcing white filler further comprises silica and/or alumina.
- 9. (Original) The composition according to Claim 1, further comprising one or more carbon blacks as a reinforcing filler.
- 10. (Currently Amended) The composition according to any of Claims 1 and 9 Claim 2, wherein the quantity total of reinforcing filler is between 30 and 200 phr.
- 11. (Original) The composition according to Claim 1, wherein the quantity of coupling agent is between 10⁻⁷ and 10⁻⁵ mole per square meter of reinforcing white filler.
- 12. (Original) The composition according to Claim 11, wherein the quantity of coupling agent is between 5×10^{-7} and 5×10^{-6} moles per square meter of reinforcing white filler.
- 13. (Original) The composition according to Claim 1, wherein the titanium oxide satisfies one or both of the following characteristics:
 - its BET surface area is within the range of 70 to 140 m²/g;
 - its particle size dw is within the range of 50 to 100 nm.
- 14. (Original) The composition according to Claim 1, wherein the titanium oxide satisfies all the following characteristics:
- it comprises by mass more than 1% of a metallic element other than titanium, selected from the group consisting of Al, Fe, Si, Zr and mixtures thereof;
 - its BET surface area is within the range of 70 to 140 m²/g;
 - its particle size d_w is within the range of 50 to 100 nm; and

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- its disagglomeration rate α is greater than $5x10^{-2} \mu m^{-1}/s$.

15. (Original) The composition according to Claim 1, wherein the coupling agent is a polysulphurized alkoxysilane.

16. (Original) The composition according to Claim 1, wherein the diene elastomer is selected from the group consisting of polybutadienes, polyisoprenes, natural rubber, butadienestyrene copolymers, butadiene-isoprene copolymers, butadiene-acrylonitrile copolymers, isoprene-styrene copolymers, butadiene-styrene-isoprene copolymers, and mixtures thereof.

- 17. (Original) The composition according to Claim 16, wherein the diene elastomer is a butadiene-styrene copolymer prepared in solution having a styrene content of between 20% and 30% by weight, a content of vinyl bonds of the butadiene part of between 15% and 65%, a content of trans-1,4 bonds of between 20% and 75% and a glass transition temperature of between -20°C and -55°C.
- 18. (Original) The composition according to Claim 17, further comprising a polybutadiene having more than 90% cis-1,4 bonds.
- 19. (Original) The composition according to Claim 1, wherein the diene elastomer is an EPDM copolymer.
- 20. (Original) A reinforcing filler comprising a titanium oxide having the following characteristics:
- (a) it comprises more than 0.5% by mass of a metallic element other than titanium, selected from the group consisting of Al, Fe, Si, Zr and mixtures thereof;
 - (b) its specific BET surface area is between 20 and 200 m²/g;
 - (c) its average particle size (by mass), dw, is between 20 and 400 nm; and
 - (d) its disagglomeration rate, α, measured by the ultrasound disagglomeration

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test, at 100% power of a 600-watt ultrasonic probe, is greater than $2x10^{-2} \mu m^{-1}/s$, wherein the filler reinforces a diene rubber composition usable for manufacturing tires.

- 21. (Original) A process for reinforcing a diene rubber composition usable for the manufacture of tires, comprising incorporating by mechanical kneading into the diene rubber composition in an uncured state a titanium oxide having the following characteristics:
- (a) it comprises more than 0.5% by mass of a metallic element, other than titanium, selected from the group consisting of Al, Fe, Si, Zr and mixtures thereof;
 - (b) its specific BET surface area is between 20 and 200 m²/g;
 - (c) its average particle size (by mass), dw, is between 20 and 400 nm; and
- (d) its disagglomeration rate, α , measured by the ultrasound disagglomeration test, at 100% power of a 600-watt ultrasonic probe, is greater than $2x10^{-2} \, \mu m^{-1}/s$.
 - 22. (Original) A rubber article comprising a composition according to Claim 1.
 - 23. (Original) A tire comprising a rubber composition according to Claim 1.
 - 24. (Original) A colored tire comprising a rubber composition according to Claim 1.
 - 25. (Original) A tread for a tire comprising a rubber composition according to Claim 1.
- 26. (Original) A colored tread for a tire comprising a rubber composition according to Claim 1.

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